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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 075834.00485	
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		First Named Inventor Masataka Shinoda	
		Art Unit 2653	Examiner Tawfik A. Goma
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.			
This request is being filed with a notice of appeal.			
The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.			
I am the		[Signature] Signature Robert J. Depke Typed or printed name 312-277-2006 Telephone number 1/25/07 Date	
<input type="checkbox"/> applicant/inventor.			
<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTC/SB/96)			
<input checked="" type="checkbox"/> attorney or agent of record. 37,607 Registration number			
<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34			
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.			
<input type="checkbox"/> *Total of _____ forms are submitted.			

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.: 10/826,733 Confirmation No.: 1364
Applicant: Shinoda, Masataka
Filed: April 16, 2004
TC/A.U.: 2627
Examiner: Goma, Tawfik
Docket No.: 075834.00485
Customer No.: 33448

**PRE-APPEAL BRIEF REQUEST FOR REVIEW ACCOMPANYING
NOTICE OF APPEAL**

Mail Stop AF
Commissioner for Patents
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Alexandria, Virginia 22313-1450

S I R:

ERRORS IN THE PRIOR REJECTION

Consistent with the Review Requirements for identification of clear errors, Applicants note the following:

- I. The prior art references of *Knight* (U.S. Patent No. 6,243,350) and *Okubo* (U.S. Pat. Pub. No. 2003/0118936) fail to teach or suggest the subject matter contained in claims 1, 2, and 5 - 7.

REMARKS

A. The §103(a) Prior Art Rejection of Claims 1, 2, and 5 - 7 Is Improper

Applicants respectfully request reconsideration of Examiner's rejection of claims 1, 2, and 5 - 7 under 35 U.S.C. §103(a). Examiner has rejected these claims in view of the cited prior art references of *Knight* (U.S. Patent No. 6,243,350) and *Okubo* (U.S. Pat. Pub. No. 2003/0118936).

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Under Section 2143 of the MPEP, in order to establish a prima facie case of obviousness, the Examiner must meet three basic criteria. "First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." *MPEP §2143 rev. 3* (August, 2005). Applicant asserts that the Examiner has failed to establish a prima facie case of obviousness for at least two reasons. First, the cited references fail to teach or suggest all of the claim limitations. Second, there is no suggestion or motivation to combine the referenced teachings. In contrast, the Okubo reference actually teaches away from any such combination.

i. The Cited References Fail to Teach or Suggest All of the Claim Limitations

In the last Office Action, the Examiner indicated that "Knight further discloses wherein said silicon layer has formed thereon a protective layer of which refractive index is larger than a numerical aperture of said objective lens (3001, Fig. 31, Col. 46 lines 47 – 49 and Col. 34 lines 45 – 47)." (emphasis added).

Applicant respectfully disagrees with both of the Examiner's assertions. Applicant submits that the Knight reference fails to disclose wherein the protective layer is formed on the recording layer, and furthermore, that the reference discloses a numerical aperture range and a potential refractive index, but fails to teach or suggest any relationship between the two or disclose any embodiments that fall within the claimed range.

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First, as clearly shown in Fig. 31 and Col. 34, lines 45 – 47 (the same portions cited by the Examiner), the protective SiN coating is formed on the SiO₂ dielectric layer 3001, not on the recording layer 3002, as currently claimed. For at least this reason, Applicant submits that the rejection must be withdrawn.

Second, Applicant submits that the Knight reference fails to disclose the claimed relationship between the numerical aperture of the objective lens (optical head) and the refractive index of the protective layer. The Examiner appears to rely upon the general disclosure in the reference that the numerical aperture of the optical heads should be “greater than unity” (See the Abstract of the Invention and Claim 29) along with the disclosure of a SiN protective layer having a refractive index of 2.0 (See Column 34, line 46). Such a general statement regarding the numerical aperture cannot amount to an enabling disclosure anticipating the currently claimed relationship between the numerical aperture of the optical head and the refractive index of the protective layer. Additionally, the general disclosure, when read in light of additional portions of the specification which further counsel against using a range of numerical aperture between 1.0 and 2.0, counters the Examiner’s assertion.

For example, while the patent claims an optical head having a numerical aperture of greater than unity, Column 5, line 15 admits that the numerical aperture should be “much greater than 1.0” and more typically “more than 2.0.” Additionally, the only embodiment disclosed in the patent is shown in Column 35, lines 58 – 61 to include an objective lens having a numerical aperture of 0.65. When this numerical aperture is added to the minimum numerical aperture of

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the solid immersion lens (SIL) disclosed in Column 46, lines 18 ~ 21 of 1.4, we arrive at a total numerical aperture of 2.05, which is greater than 2.0.

The Examiner cannot rely upon the combination of the broad claimed numerical aperture in the abstract of Knight along with a particular disclosure of a protective layer index of refraction, when the same particular disclosure teaches the use of a protective layer index of refraction that actually teaches away from the currently claimed relationship. Rather, in order to assert a proper and enabling prior art disclosure, Applicant submits that the Knight reference would need to disclose a broad characterization of the numerical aperture of the optical head and a broad characterization of the refractive index of the protective layer that anticipates the claimed relationship, or a particular disclosure of a protective layer index of refraction and a particular disclosure of a numerical aperture that falls within the range claimed, or any combination thereof as long as the two are consistent. Knight, however, fails to disclose any consistent portion of the claimed range.

In light of the forgoing, Applicant submits that the Knight reference actually teaches away from an optical head and protective layer having the claimed relationship. For at least this reason also, Applicant submits that the rejection must be withdrawn.

Finally, Applicant notes that even if it is held that Knight discloses a portion of the claimed range, the Knight reference fails to recognize the relationship between the refractive index of the protective layer, relative to the numerical aperture of the objective lens, as a result effective variable. As noted in the MPEP, "A particular parameter must first be recognized as a

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result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.” (See MPEP §2144.05 and *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)).

ii. The Cited References Fail to Provide a Suggestion or Motivation to Combine

Applicant submits that the cited references of record fail to provide a suggestion or motivation to combine. The Okubo reference is directed to a conventional optical storage medium and reproducing method including a Si-based recording layer 2 formed on a thick substrate 1. Applicant submits that one of ordinary skill in the art would not have been motivated to combine the disclosure of Okubo, related to a conventional optical storage medium utilizing a thick substrate 1 formed on the light receiving side of the recording layer, to the near-field reproducing method utilized in Knight. More specifically, Applicant submits that the method and apparatus disclosed in Okubo would not function in a near-field based optical reproducing system due to the thick substrate 1. Okubo clearly teaches away from any such combination in paragraph [0073], where the applicant teaches that the “record layer 2 formed on the substrate 1 is the most desirable because the structure is the simplest.” Applicant notes that the Court of Appeals for the Federal Circuit has held that “It is improper to combine references where the references teach away from their combination.” *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). For these reasons also, Applicants submit that the 35

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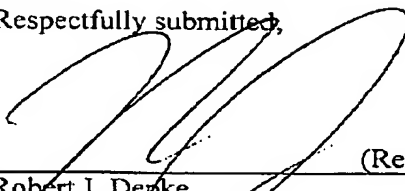
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U.S.C. §103(a) rejection must be withdrawn, and claims 1, 2, and 5 – 7 placed in condition for allowance

Date:

1/25/07

Respectfully submitted,



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